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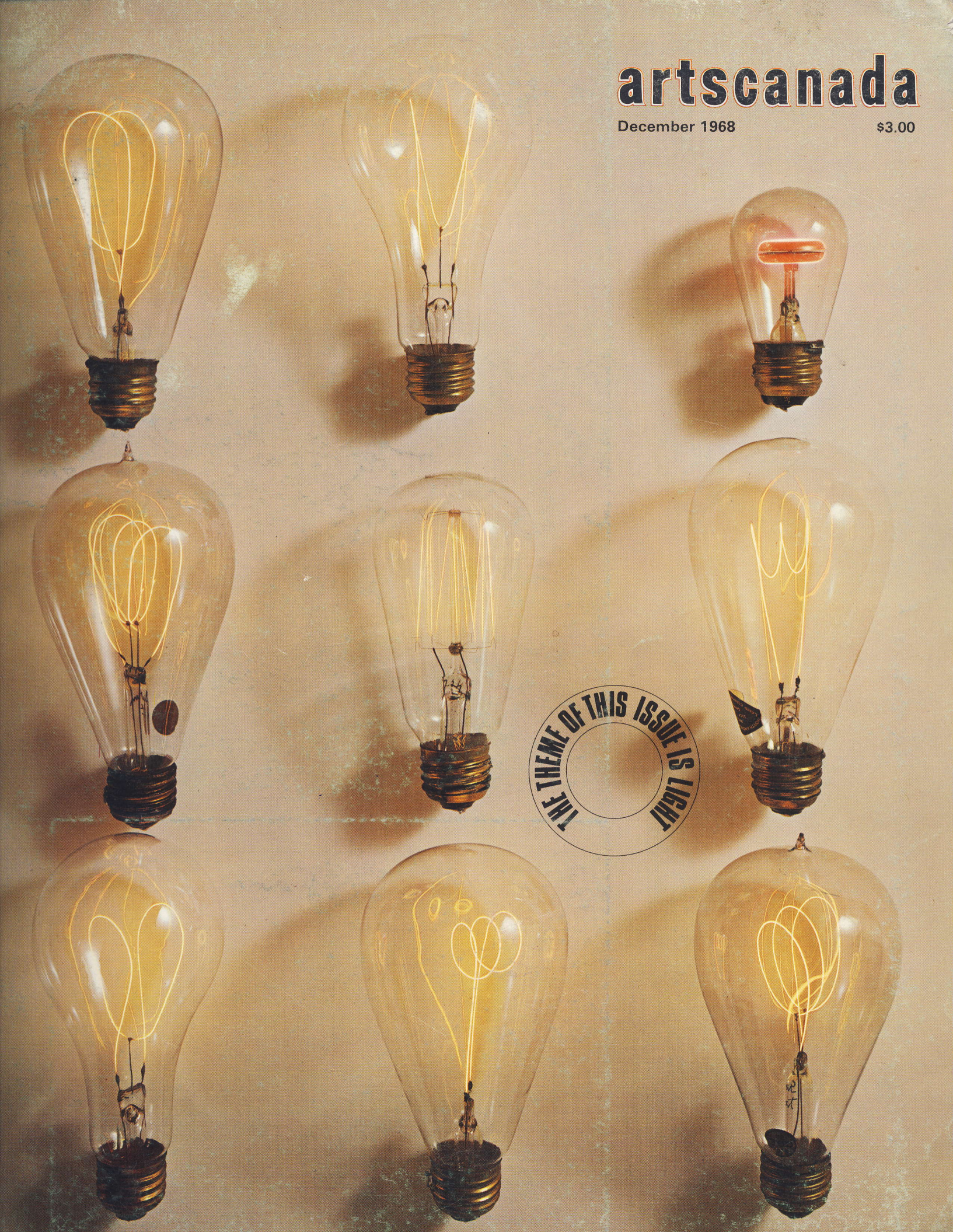
December 1968 $3.00



Pulsa

by Lucy R. Lippard

Lucy Lippard, Advisory Editor and regular contributor to *Art International,* is preparing, on a Guggenheim grant, a major work on Ad Reinhardt to be published by Abrams. Her article on Vancouver artists appeared in *Art News* last September; and she is writing the text for the Vancouver Art Gallery's *New York 13* show.

Pulsa is a seven-man team of research associates at Yale University. It was begun independently in the fall of 1966 by David Rumsey, a filmmaker, and Michael Cain and Patrick Clancy, painters from the Yale graduate school. In 1967, they were joined at the Orange Street loft in New Haven by Bill Crosby, who had been making electronic light-sound objects in New York, Paul Fuge, a photographer and electrical designer, Peter Kindlmann, a faculty engineer, and Bill Duesing, a photographer and former architectural student. They make programmed light-sound environments, and they make them in a unified, intelligent and disciplined manner, devoid of decorative prettiness and jazzy entertainment effects. The three phases accomplished so far, highly abstract and part of a continuously evolving concept, are the best I have seen in this burgeoning field:

1 Laboratory period in the loft. Equipment was gathered, tested and augmented. Incandescent lights were replaced by banks of fluorescents (daylight, cool white, natural) and the initial record-tape system was replaced by an electronic music generator able to create its own sounds. Rippling fields of fluorescent light folding and unfolding at various intervals in a dark room were periodically broken by abrupt flashes of strobe-light. Though all the lights were white, prolonged exposure produced the retinal illusion of a spectrum of pastel colors. The diverse sound programs related to but did not directly reflect the rhythms of the lights. The show lasted as long as one wanted to stay; after the first half hour it became increasingly difficult to separate oneself from the environment.

2 Public showing, Spring-Summer, 1968, at the Yale School of Art and Architecture. More fully developed version of the loft experiments which continued to change during the exhibition period. The space was much larger than the loft, but less uniform and more difficult to control. It was disguised and manipulated until a complex and often illusory space was constructed of reflective mylar panels and solid walls and angles of light — over 1000 tubes for which a special epoxy capping technique was devised to provide both electrical contact and structural support. The increasingly complex control system was a hybrid, incorporating computer elements, with circuitry that generated voltage sequences variable in both frequency and amplitude. The signals could be fixed and programmed to repeat themselves in any desired time interval, and a number of programs could run simultaneously at any speed; each program could be routed to any or all of the light walls. (For fuller explanation, see The Yale Alumni Magazine, **May, 1968, and** Eye: Magazine of the Yale Arts Association, **no. 2, 1968.)**

3 Programmed Environment, Boston Public Gardens, Oct. 8-27, 1968. The four-acre Swan Boat pond was activated by 55 xenon strobe-lights under water and 52 poly-planar speakers at water level, programmed by elements of analog and digital computers, a punch-paper tape reader, a signal synthesizer, and magnetic tape. Before each piece began (at sunset, to utilize the changing lights of that time of day), nothing interrupted the usual scenery but small, flat, white speakers, set unobtrusively along the pond's perimeter. The pond, cut by a bridge, is a curved shape and therefore not fully visible from any one vantage point. When darkness falls, the lights of the tall buildings surrounding the park come on, casting multicolored reflections in the pool; these looked more like the standard light show than any of the understated phenomena Pulsa produced. One saw and heard flashes of light and sound whipping over the water surface at the rate of 200-300 m.p.h., like high-speed skipping stones whose direction, pattern and rhythm were capable of endless modulation. Each point of brightness crossed one's vision instantaneously, and was retained largely as an after-image resembling a flying saucer of luminescence, an oval corona of light refraction with a higher-intensity blip at the center. While it was clear that the path of these flashes described a line of some kind, it was impossible to reconstruct a linear configuration of any enduring or analyzable particularity. Sound-light rhythms were pervasive but elusive, entirely non-relational.

This non-relational, non-referential quality is at the core of Pulsa's achievements. In all three projects, the configurations created were so abstract that they seemed to exist at some new perceptual threshold. One sensed a highly disciplined system which could be neither statically nor singly captured. The effect was one of great beauty. In a direct demonstration of how information is received, the high speed with which the light and sounds were relayed into and out of one's vision, hearing, and mental focus seem to bypass the associative channels of the brain. Just as the sea evokes nothing but the sea, because it is so powerful a phenomenon in itself, so these experiences have seemed sufficiently informative about themselves and their surroundings to block anecdotal and Rorschach responses.

There is little transformation involved in the Pulsa experiences. The areas of the brain affected are those used but not challenged by the everyday environment. By discouraging imagery of any kind, formal/non-objective or figurative, fantastic or diagrammatic, the group demands a gradual perceptual adaptation in the participant. The sensitive response can be called psycho-physiological rather than just sensuous or physical, though a physiologist who has talked to the group strongly objects to the use of the term in this general context. The fact remains that works of art which are either too diffuse and expansive to be perceived by a single or gestalt response (like Pulsa) or in which the information-content is too low to allow the standard formal or associative response (like Ad Reinhardt's last black paintings), do call up a non-verbal or "physiological" reaction that precludes the thought-patterns usually attached to esthetic pleasure, though the psychological components may be basically the same.

Time is obviously an important element in the Pulsa experience. It takes a certain duration (not necessarily concentration) to comprehend any of their projects. After the initial period of immediate perception, and a secondary interim when I, for one, attempt to make some single formal sense of the light-sound relationships and then reject it as futile, the real experience begins with an absorption of the very subtle structures on a "physiological" level. The longer one spends becoming involved in the work, the clearer one's sensations become, until they take on a obsessive and almost revelatory character. The drawn-out time sense, the real disregard for clock time and the introduction of some sort of personal body time, different for each viewer, is the only "psychedelic" dimension of Pulsa. Ideally the experience would go on forever, and the artificial audience-art object relationship would be destroyed for good.

An environmental project clearly provides a much more subliminal effect than does an object isolated in a gallery or museum, especially an environment as open as Pulsa in Boston, which was seen not only by a selected or selective audience but by the accidental passersby in the Common, some of whom never knew they had been exposed to a work of art; others probably sensed the event before arriving consciously at its source. It was all but invisible when not in operation, and even when it was working the impression was of a natural rather than an artificial event. Despite its size, it shared with the New Haven shows an intimacy that is entirely absent from the usual layman's response to an unfamiliar art seen in a self-conscious situation. It is more like art in the home than in the gallery or museum.

In New Haven, for instance, complete privacy seemed possible no matter how many people wandered by or sat down next to you and moved on. The spaces were projected on and into the viewer as much by the physical attributes of the pulsing light and sound as by the real dimensions of the room. Light and sound pulses became peculiarly tangible, and

Programmed Environment,
Boston Public Gardens,
Oct. 8-27, 1968.

often so pervasive that it seemed the senses themselves were being turned off and on. Sensations of what was happening beside or behind you were equally as important as directly visible phenomena; peripheral vision and its auditory counterpart were used to an unaccustomed extent. After a certain period, one's knowledge of the room as it existed disintegrated, and the space was redefined by the successive programs, impossible to identify in terms of pattern but formidably present as rhythm, "not the tap-your-foot kind of rhythm, but a visual rhythm of light," one spectator remarked.

Plastic art is traditionally not only visible but formally intelligible. While much intermedia, dematerialized, or purely conceptual art is still recognizably related to primary structures and to various highly attenuated and evolved versions of conventional painting and sculpture, Pulsa seems closer to the music of Cage, Young, Riley, Tenney, Mumma and others; to the new dance, beginning with Merce Cunningham's non-synchronized use of music; to such inventive architecture as Buckminster Fuller's, according to his theory of "non-simultaneous configurations"; or even to the esthetics of pure science. When one walked around the pond in Boston, subtly bombarded by the persistent flashes and altering sound, it was more than just walking around as though to peruse an object from all angles and distances. This is the virtue of a performance context, theatrical or antitheatrical; during a period of an hour or more, object consciousness, no matter how wilfully imposed, tends to break down, and the accidental "audience" also serves to break down barriers between what one sees and what one is supposed to *look at.*

For all the talk about the alliance of art and technology, about the advent of industrial patronage and a new public art, and about the disintegration of the art-object, few groups and fewer individual artists have been able to combine successfully the technical sophistication and esthetic validity necessary for real innovation in the field. Pulsa is unique because it really is directed outward, to the real rather than the art world. They are really concerned with environment rather than performance. They are equally involved in audio and visual phenomena. In fact, their main concern is the evolution of new programming techniques, a control system that will make possible the most diverse and subtle public art projects, and this concern remains for them above and distinct from the particular works that comprise the various phases of such an evolution.

A true public art is one in which the art itself cannot be claimed by any private body — collector or institution. For obvious reasons, the gap between Pulsa and most art being made today will be felt most strongly in the art world, if the art world ever becomes deeply involved in this part of its domain. A developed non-theatrical art of programmed environment would make the public familiar with the art and with its environment at the same time, without being forced into unnatural patterns of thought or activity. This does not, as far as I am concerned, invalidate object art and art for art's sake. On the contrary, if in some ideal society the two co-existed and everyone were exposed to both, object art would gain a broader and more sensitive audience, though it remains to be seen whether high standards and major talents would survive such a diffusion.

Pulsa is mainly interested in working in urban or man-made environments; they have projected a continuous light/sound show to be held the length of a highway, including built-in safety devices. But having worked in Boston with nature in an urban setting, they are also intrigued with the possibilities of trying something in a large natural space. This fall they are organizing a series of seminars that will include discussions and demonstration experiments covering music, art, technology, city planning, and anything else anyone cares to bring up. The last session will be the testing of a new project on the Yale golf course, utilizing colored electroluminescent panels, liquid crystals, and other new materials. For the first time, an academic framework for the artist seems to make real sense. The fact that so many artists today are already in one does not mean that teaching is an ideal or even happy way for many of them to make a living. But for a research group like Pulsa, a great university offers advantages that range from the intellectual and technical resources to foundation support and use of the Yale letterhead in requests for government surplus, discounts or industrial patronage.

One can only hope that Pulsa will continue to find support for its increasingly ambitious ideas. The 20 nights in the Public Gardens cost about $10,000 and would have cost an additional $10,000 without donated materials; they were backed by the Boston Redevelopment and Parks Department, several industries, and Signs/Lights, a project office of Ashley-Meyer, which has a government grant for research in urban lighting. MIT made its natural and electronic brains available. Lone artists with equally grand ideas do not receive such support, and the team approach demands repression of the individual ego on a level generally unacceptable to even a slightly older generation. Pulsa works closely and amicably together, integrates several different types of training, and its members are young enough not to have developed strong particular styles within the environment medium that would interfere with broader goals. With professional fabrication and the breakdown of distinctions between different media and different arts, the team approach, and Pulsa itself, are indicative of the changes we can expect in art, and hopefully in the current control system of the art world, during the last half of the century.